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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/719,872	11/21/2003	Atsushi Hoshiai	230980-0252	3047

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EXAMINER
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QIN, JIANCHUN

ART UNIT	PAPER NUMBER
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2837

DATE MAILED: 01/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/719,872

Applicant(s)

HOSHIAI ET AL.

Examiner

Jianchun Qin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 November 2005.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-5, 7-13 and 15-20 is/are rejected.  
7) ☒ Claim(s) 6 and 14 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyashita et al. (U.S. Pub. No. 20030103422) in view of Kay (U.S. Pub. No. 20040099125).

With respect to claim 1:

Miyashita et al. disclose an electronic musical instrument for playing back an audio phrase (the Abstract), comprising: tempo setting means for setting a playback tempo of the audio phrase (Figs. 13 and 14; sections 0057-0059); first readout position means for generating first audio phrase readout positions in conformance with a playback tempo set by the tempo setting means (sections 0100 and 0101); a readout position change operator that is operable by a performer to indicate a desired amount of readout position change (sections 0054, 0058, 0059, 0062 and 0077); second readout position means for generating second audio phrase readout positions in conformance with operation of the operator by the performer (sections 0063-0065, 0068 and 0104);

and signal processing means for playing back said audio phrase in accordance with said second audio phrase readout positions when the operator is being operated, and for playing back said audio phrase in accordance with said first audio phrase readout positions when the operator is not being operated (Fig. 1, #7; Figs. 5-7; section 0126).

Miyashita et al. do not mention expressly: second readout position means for generating second audio phrase readout positions during and in conformance with operation of the operator by the performer; and signal processing means for playing back said audio phrase in accordance with said second audio phrase readout positions during the performer's operation of the operator, and for playing back said audio phrase in accordance with said first audio phrase readout positions after the duration of operation of the operator, when the operator is not being operated.

Kay discloses a method and apparatus for phase controlled music generation, and teaches: second readout position means for generating second audio phrase readout positions during and in conformance with operation of a readout position change operator by a performer (sections 0466, 0476, 0502-0510, 0558, 0560, 0572-0578, 0587 and 0589); and signal processing means for playing back said audio phrase in accordance with said second audio phrase readout positions during the performer's operation of the operator, and for playing back said audio phrase in accordance with a first audio phrase readout positions after the duration of operation of the operator, when the operator is not being operated (sections 0466, 0476, 0502-0510, 0558, 0559, 0572-0578, 0587 and 0589).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the teaching of Kay in the invention of Miyashita et al. in order to provide a music playback instrument that is capable of reading out audio phrase data from a memory independently and selectively, and different audio phrases can be played during the process of changing readout positions (Kay, section 0060).

With respect to claims 2 and 3:

The teaching of Miyashita et al. further includes: the operator comprises a pressure sensitive surface (14) and is operated by applying pressure to a location on the surface and moving the location (Fig. 1; sections 0076-0077); the operator comprises switching means for indicating termination of operation of the operator (section 0069).

3. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyashita et al. in view of Kay, as applied to claim 1 above, and further in view of Takahashi (U.S. Pub. No. 20020100359).

Miyashita et al. teach the instrument that includes the subject matter discussed above.

Miyashita et al. in view of Kay do not mention expressly: the audio phrase is stored as waveform data.

Takahashi discloses an apparatus and method for processing audio waveform data that constitute musical performance data string (the Abstract), wherein said waveform data are stored in a waveform memory (section 0031).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the teaching of Takahashi in the combination of Miyashita et al. and Kay in order to provide a data format that is capable of constituting a musical performance data string in association with audio data representing audio phrases which may be easily edited and is convenient for use in an automatic musical performance apparatus (Takahashi, sections 0005 and 0007).

4. Claims 5, 7-9, 13 and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyashita et al. in view of Takahashi (U.S. Pub. No. 20020100359) and Kay.

With respect to claim 5:

Miyashita et al. further disclose an electronic musical instrument, comprising: a storage area storing audio data (section 0031); a tempo setting operator for receiving user input specifying a playback tempo for the audio data (Figs. 13 and 14; sections 0057-0059); a readout position change operator that is operable by a user to indicate a desired amount of audio data readout position change (sections 0054, 0058, 0059, 0062 and 0077); and a computer readable medium storing programming instructions for causing the instrument to perform processing (section 0084) comprising: generating first audio data readout positions in accordance with a playback tempo set by the tempo setting operator (sections 0100 and 0101); when the readout position change operator is being operated, generating second waveform data readout positions in accordance with operation of the readout position change operator and playing back said audio phrase in accordance with said second waveform data readout positions (sections

0063-0065, 0068 and 0104); and when the readout position change operator is not being operated, playing back said audio phrase in accordance with said first waveform data readout positions (sections 0100, 0101, 0126 and Figs. 5-7).

Miyashita et al. do not mention expressly: said audio data is audio waveform data stored in a waveform memory; said readout position change operator to indicate, during operation of the readout position change operator, a desired amount of audio data readout position change; and after the duration of operation of the readout position change operator, when the readout position change operator is not being operated, playing back said audio phrase in accordance with said first waveform data readout positions.

Takahashi discloses an apparatus and method for processing audio waveform data that constitute musical performance data string (the Abstract), wherein said waveform data are stored in a waveform memory (section 0031).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the teaching of Takahashi in the invention of Miyashita et al. in order to provide a data format that is capable of constituting a musical performance data string in association with audio data representing audio phrases which may be easily edited and is convenient for use in an automatic musical performance apparatus (Takahashi, sections 0005 and 0007).

Kay discloses a method and apparatus for phase controlled music generation, and teaches: a readout position change operator that is operable by a user to indicate, during operation of the readout position change operator, a desired amount of audio

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data readout position change (sections 0466, 0476, 0502-0510, 0558, 0560, 0572-0578, 0587 and 0589); and after the duration of operation of the readout position change operator, when the readout position change operator is not being operated, playing back said audio phrase in accordance with a first audio data readout positions (sections 0466, 0476, 0502-0510, 0558, 0560, 0572-0578, 0587 and 0589).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the teaching of Kay in the invention of Miyashita et al. in order to provide a music playback instrument that is capable of reading out audio phrase data from a memory independently and selectively, and different audio phrases can be played during the process of changing readout positions (Kay, section 0060).

With respect to claim 13:

Miyashita et al. further teaches a method for producing an audio signal from audio source data, comprising: generating first audio data readout positions for producing said audio signal at a specified playback tempo (sections 0054, 0058, 0059, 0062 and 0077); upon detecting operation of a readout position change operator, generating second audio data readout positions in accordance with operation of the readout position change operator and producing said audio signal from the source data in accordance with said second audio data readout positions (sections 0054, 0058, 0059, 0063-0065, 0068, 0077 and 0104); and when the readout position change operator is not being operated, producing said audio signal from the source data using said first audio data readout positions (sections 0100, 0101 and 0126).



Miyashita et al. do not mention: said audio source data is audio waveform data; during detecting operation of a readout position change operator, generating second audio data readout positions in accordance with operation of the readout position change operator and producing said audio signal from the source data in accordance with said second audio data readout positions; and after the duration of operation of the readout position change operator, when the readout position change operator is not being operated, producing said audio signal from the source data using said first audio data readout positions.

Takahashi discloses an apparatus and method for producing an audio signal from audio waveform data, wherein said waveform data are stored in a waveform memory (the Abstract and section 0031).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the teaching of Takahashi in the invention of Miyashita et al. in order to facilitate the generation of an audio signal by providing a data source of waveform type that is capable of constituting a musical performance data string in association with audio data representing audio phrases which may be easily edited and is convenient for use in an automatic musical performance apparatus (Takahashi, sections 0005 and 0007).

Kay teaches: during detecting operation of a readout position change operator, generating second audio data readout positions in accordance with operation of the readout position change operator and producing said audio signal from the source data in accordance with said second audio data readout positions (sections 0466, 0476,

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0502-0510, 0558, 0560, 0572-0578, 0587 and 0589); and after the duration of operation of the readout position change operator, when the readout position change operator is not being operated, producing said audio signal from the source data using said first audio data readout positions (sections 0466, 0476, 0502-0510, 0558, 0560, 0572-0578, 0587 and 0589).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the teaching of Kay in the invention of Miyashita et al. in order to provide a music playback instrument that is capable of reading out audio phrase data from a memory independently and selectively, and different audio phrases can be played during the process of changing readout positions (Kay, section 0060).

With respect to claims 7-9 and 15-17:

The teaching of Miyashita et al. further includes: the readout position change operator comprises a pressure sensitive surface (14), wherein operation of the readout position change operator is indicated by the application of at least a predetermined amount of pressure to the surface, and wherein an amount of readout position change is indicated by an amount of angular movement of a location of said pressure on the surface with respect to a reference point (Fig. 1; sections 0076-0077); angular movement in a first direction indicates forward movement of the second readout positions with respect to the first readout positions, and angular movement in a second direction indicates backward movement of the second readout positions with respect to the first readout positions (sections 0058 and 0059); angular movement by a

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predetermined amount indicates a readout position change corresponding to a predetermined unit of musical time of the waveform data (section 0075).

5. Claims 10-12 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyashita et al. in view of Takahashi and Kay, as applied to claims 5 and 13 above, and further in view of Capps et al. (U.S. Pat. No. 5074182).

Miyashita et al. in view of Takahashi and Kay teach the instrument that includes the subject matter discussed above.

The combination of Miyashita, Takahashi and Kay does not mention expressly: regarding claim 10, the readout position change operator comprises a bender lever, wherein an amount of readout position change is indicated by an amount of movement of the lever in either a first direction or a second direction opposite said first direction; regarding claim 11, movement of the lever in the first direction indicates forward movement of the second readout positions with respect to the first readout positions, and movement of the lever in the second direction indicates backward movement of the second readout positions with respect to the first readout positions; regarding claim 12, termination of use of the bender lever is indicated by movement of the lever in a third direction different from the first and second directions.

Capps et al. disclose an electronic musical instrument having an operator for operating the performance of the instrument (the Abstract), comprising: a bender lever (col. 2, lines 38-49), wherein a sequence of distinct signals for controlling the operation of the instrument is indicated by an amount of movement of the lever in either a first direction or a second direction opposite said first direction (col. 2, lines 38-49); the

movement of the lever in the two opposite directions indicates various distinct signals corresponding to different starting points of the operation of the instrument (col. 2, lines 38-49; col. 4, lines 45-58); and termination of use of the bender lever is indicated by movement of the lever in a third direction different from the first and second directions (col. 2, lines 38-49; col. 4, lines 45-58).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the teaching of Capps et al. in the combination of Miyashita et al., Takahashi and Kay in order to provide a multi-function actuator of "bender" type (as in a real guitar) to give precisional control of the operational parameters to said musical instrument (Capps et al., col. 2, lines 38-49).

#### ***Allowable Subject Matter***

6. Claims 6 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Reasons for Allowance***

7. The following is an examiner's statement of reasons for allowance:

The primary reason for the allowance of claims 6 and 14 is the inclusion of the limitation that upon termination of operation of the readout position change operator, playback of the waveform data returns to synchronization with the specified playback tempo at a readout position that would be the current readout position had the readout

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position change operator not been operated. It is this limitation found in the claim, as it is claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes this claim allowable over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

***Prior Art Citations***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1) Reinhold et al. (U. S. Pat. No. 6483109) is entitled "Parameter selecting technique for use in music performance apparatus".

***Response to Arguments***

10. Applicants' arguments received 11/18/2005 with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Claims 1-5, 7-13 and 15-20 are rejected as new prior art reference (U.S. Pub. No. 20040099125 to Kay) has been found to teach the limitation of argued by the Applicants. Detailed response is given in sections 1-5 as set forth above in this Office Action.

With respect to claims 2, 7-9 and 15-17, Applicants argued that Miyashita et al. "do not appear to describe or suggest a pressure sensitive surface .....". This argument is not persuasive. The Examiner's position is that the Miyashita reference does teach that limitation. The rejection stands.

With respect to claims 6 and 14, Applicants' arguments are persuasive. The rejection made in previous Office Action is hereby withdrawn.

**Contact Information**

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jianchun Qin whose telephone number is (571) 272-5981. The examiner can normally be reached on 8:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Martin can be reached on (571) 272-2107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JQ

January 11, 2006



Jianchun Qin  
Examiner  
Art Unit 2837



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